

UNDERSTANDING CARBON EXCHANGE MARKETS: Which Exchange is Right for You?

**The Global Emissions Exchange
The Chicago Climate Exchange
The European Climate Exchange
The Green Exchange**

Greenhouse gas emissions have become monetized commodities under new mandates to reduce our impact upon the climate. Under the Kyoto Protocol, nation members are obligated to meet particular emissions reductions within established guidelines. To facilitate a smooth economic transition toward less CO₂, NO_x, and SO_x production, a market mechanism for trading pollution rights was developed among Kyoto members. This model has been replicated in a voluntary market currently being established within the United States and other non-Kyoto nations.

The principles of an emissions market are relatively simple. Under a mandatory system, those who can reduce emissions receive economic value by being able to sell reductions to those who cannot meet mandatory limits. In this way, market equilibrium is achieved between emitters and savers. The voluntary market also requires some form of greenhouse gas mandate to impart value for emissions reduction efforts. Thus, the term "voluntary" is somewhat of a misnomer because participants promise to adhere to specific emissions reductions and schedules. As an example, members of the Chicago Climate Exchange make a contractual pledge to reduce emissions as a membership condition. Since the European Community operates under governmental reduction mandates, their Carbon Market is the most advanced and enjoys the widest participation and highest carbon values.

Currently, there are three emerging business-to-business carbon markets including:

The European Climate Exchange (ECX) – currently operational
The Chicago Climate Exchange (CCX) – currently operational
The Green Exchange – Planned for launch by second quarter 2008

There is one open platform carbon market that also provides for fractional carbon trading:

The Global Emissions Exchange (GEX) – currently operational

Business-to-business carbon markets operate as traditional commodity marketplaces and are modeled after conventional futures and cash markets. The European Climate Exchange was recently consolidated under the Chicago Climate Exchange to form a bridge between mandated and voluntary emissions markets. The Green Exchange is a new venture between major Wall Street financial institutions and the New York Mercantile Exchange (NYMEX), which originated energy futures markets for crude oil, gasoline, heating oil, and natural gas. The Green Exchange intends to compete directly with the CCX and ECX.

Business-to-business exchanges trade in 100 metric ton blocks of CO₂ emissions commonly called Carbon Financial Units. In order to create these units, substantial quantities of CO₂ must be reduced or sequestered. Typical sources for CO₂ are methane reductions from landfills, coal mines, sewage facilities, and animal waste remediation. In addition, very large conservation projects can qualify for reductions when energy conservation measures are aggregated.

What Is A Carbon Offset?

Simply put, a carbon offset is a *calculated* reduction in the affect of CO₂ emitted into the atmosphere. This means that an offset does not necessarily consist of a direct reduction of emitted CO₂. It can be a reduction in other greenhouse gasses that are *calculated* into CO₂ equivalence such as methane-to-CO₂. As interest in becoming “carbon Neutral” increases, increasing scrutiny is being given to sources and derivations of carbon offsets. The following terms apply:

ADDITIONALITY - questions whether a reduction would have been made under the normal course of business or as a requirement under new emissions standards. For example, certain projects like planting trees can currently qualify for emissions reductions since trees convert CO₂ into oxygen and chained carbon molecules. However, if trees would have been planted in the normal course of business, the “creation” of an *additional* economic incentive through CO₂ reduction is questionable and contradicts the very principle of reducing greenhouse gas emissions. In effect, planting trees *allows* emitters to continue polluting through a market loophole... manufactured CO₂ reductions that *would have been made* through the *normal course of business*.

AGGREGATION – Since many conservation efforts only lead to modest CO₂ reductions, carbon credits can consist of many aggregated reductions that create a larger block of CO₂.

BASELINE – The carbon baseline represents the amount of CO₂ emitted before implementing one or more energy conservation measures(ECMs) or capture & destroy methodologies.

OWNERSHIP – Carbon reductions are generally owned by the individual or entity implementing the ECM or sequestering. However, carbon credits are considered fungible and ownership can be transferred or assigned.

PERMANENCE – The degree to which the reduction is permanent. For example, a dairy farm that converts manure to methane for burning might close, or a forest planted to reduce CO₂ might burn down. An incandescent bulb swapped for a compact fluorescent might be swapped back.

QUANTIFICATION – This determines the amount of CO₂ or equivalent greenhouse gas that is reduced by an ECM or sequestering methodology.

REGISTRATION – The process of qualifying, quantifying, verifying, an recording emissions reductions (CO₂, SOx, NOx, VOCs, and particulates).

VERIFICATION – There are various methods and degrees used to verify the implementation of an ECM or sequestering. Proof of use and a carbon reduction protocol usually set the standard for verification in conjunction with accepted government energy statistics.

A Different Paradigm – The Global Emissions Exchange (GEX)

The Global Emissions Exchange offers a different business model that provides *comprehensive market participation* from individuals to the largest corporate and sovereign entities. Unlike the ECX, CCX, and planned Green Exchange, the GEX is a **carbon registration platform** that qualifies, quantifies, tracks, and aggregates emissions reductions from single light bulbs to entire

renewable energy projects. The GEX is the only “people’s exchange” that provides full functionality to register energy conservation measures (ECMs) with related emissions reductions, trade accumulated emissions credits, and track emissions reduction programs or efforts. The GEX is a “Fractional Carbon Exchange” that can register as little as one pound of CO₂ reduction. The GEX uses the Kyoto Gold Standard in qualifying emissions reductions.

Why Use The GEX?

The GEX is the *only platform* that addresses small, but cumulative emissions reductions. These efforts are already underway at the Federal, state, and local government levels as well as at universities and throughout corporate America. For example, many Change-a-Bulb campaigns have been initiated to swap compact fluorescent or LED lighting for incandescent bulbs. Unfortunately, the specific results of these programs have been lost for lack of a tracking process. That tracking process is available on the GEX at *no cost* to participants.

The GEX is designed to work hand-in-hand with grassroots efforts to *truly reduce pollution and save energy*. From energy efficient cars (hybrids) to super lubricants, every registration on the GEX has *verifiable energy savings* and associated emissions reductions. Thus, the intent of the carbon incentive is preserved... *to reduce energy consumption and related emissions*. Moreover, the GEX acts as a *tracking and reporting mechanism* to facilitate meeting mandates or voluntary goals, one step at a time. **CONSIDER THESE ESSENTIAL DIFFERENCES:**

| | GEX | CCX | ECX | GREEN EXCHANGE |
|--------------------------------|-----|-----|------|----------------|
| Membership Fees | NO | YES | YES | YES |
| Membership Required | NO | YES | YES | YES |
| Open to Public | YES | NO | NO | NO |
| Exclusivity | NO | YES | N/A | N/A |
| ECM* Tracking | YES | NO | NO | NO |
| Fractional Carbon | YES | NO | NO | NO |
| Gold Standard | YES | NO | SOME | NO |
| Auto Aggregation | YES | NO | NO | NO |
| Auto Foot-printing | YES | NO | NO | NO |
| Control of CO ₂ use | YES | NO | NO | NO |
| Transparency | YES | NO | NO | NO |
| Customization | YES | NO | NO | NO |
| Trading Platform | YES | N/A | N/A | N/A |
| Retail Outlet | YES | NO | NO | NO |
| Credit Cards | YES | NO | NO | NO |
| Technology Store | YES | NO | NO | NO |
| Emissions Calculators | YES | NO | NO | NO |

(*ECM = Energy Conservation Measure)

The unique and patented GEX platform gives registrants **complete control** over energy and emissions reduction efforts which leads to **total transparency**. You know the legitimacy of the emissions reductions because they come from *your verified energy conservation measures* or renewable energy projects, and those of fellow registrants. You control how emissions credits are used. You can sell, offset, swap, allocate, trade, or expire credits. This means you can conform to any internal or external emissions policy... now, or in the future.

Selling – Place your credits for sale in the market

Offset – Use credits to offset externally generated carbon from air travel, etc.

Swap – Exchange credits between entities

Allocate – Donate credits to charity, university, organization, renewable energy project

Trade – Buy and sell credits for speculative gains

Expire – Achieve a net/net emissions reduction by holding credits until they expire

Track – Use GEX to track energy conservation measures, report specific and/or aggregate emissions reductions, calculate return on investment, and more

HOW THE GEX WORKS

The GEX is an electronic meeting & matching place where manufacturers of energy conserving or renewable technologies can list products, technology, and services that are available to the public. In turn, users of the technology can register purchases and implementations to receive associated emissions reduction credits. There are no membership fees or dues. There are no contractual obligations to reduce emissions by either manufacturers or registrants. The incentive to reduce is obvious and self-fulfilling.

The GEX assumes legal title to emissions reductions to permit aggregation. A portion of the emissions credits accrue to the GEX as income. Registrants retain control over remaining emissions by proxy and can determine how credits will be used.

BIG IDEAS

- Coordinated energy savings campaigns like Change-a-Bulb can be used to generate funds for renewable projects, pollution remediation, or other public causes.
- Carbon funds can be established at the community level with total flexibility. For example, a university can engage its student body and alumni to register energy conservation measures on the GEX for donation back to the university. This provides a pool of CO₂ credits that can be used to offset campus expansion that, by definition, will increase the carbon footprint.
- Government agencies can register and track multi-tiered energy programs from energy conservation measures to co-generation and renewable energy projects. Carbon footprinting, Critical path schedules, progress, carbon value, return on investment, and other related data are all available through GEX reporting services.
- Custom GEX interfacing is available for branding, i.e. State of Maine Energy Challenge, Commonwealth of Pennsylvania Green Contest, State of Connecticut One Step at a Time Initiative.

There are no limits to creative programs and solutions available with the flexible GEX platform.

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13

INTRODUCING

The Global Emissions Exchange

Qualify • Quantify • Track •

Trade

Emissions Reductions

The *optimum* program for

CONNECTICUT



Emissions Reductions By the People – For the People!



Fractional Carbon
Registration -
From a single bulb
An industrial wind
farm

Ideal Platform for
One Thing
Initiative

No membership
Requirement.
No annual fees.
No mandatory
Reductions.



vs. Other Exchanges

Chicago Climate Exchange (CCX), European Climate Exchange (ECX), Green Exchange

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| Control of CO ₂ use | YES | NO | NO | NO |

Essential Features



- Encourages universal participation in energy conservation and emissions reductions – individuals, universities, municipalities, utilities, carbon projects
- Total control allows Connecticut to design and implement emissions reduction guidelines or mandates and track progress
- Flexibility permits Connecticut to create a custom interface to patented GEX engines

How the GEX Works

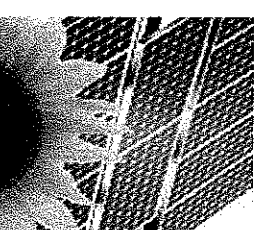
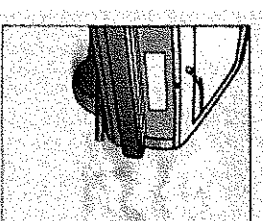


- Anyone can register energy conservation measures (ECMs) on the GEX to qualify, quantify, aggregate, and track emissions reductions
- Registrants control their emissions credits
- State and local government can measure and track emissions reductions programs
- Manufacturers register energy saving products and services on the GEX

Getting Involved



- Ability to create public awareness programs – **ONE THING**
 - Emissions reductions by municipality, agency, department
 - Emission Fund Raising (universities)
 - Emission Reduction Contest (public)
 - Renewable Energy projects
 - Forestation and sequestering



Learn More



GREEN is politically powerful, party neutral,
and totally positive. See how the GEX can
benefit Connecticut in greater detail.
Request the White Paper.

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